REMARKS / ARGUMENTS

No amendments have been made to the specification, claims, or drawings.

The USPTO rejected claims 1-11 and 15-22 pursuant to 35 U.S.C. §103(a) as being unpatentable over Price (U.S. Patent No. 4,318,700). The rejection is based on the notion that changes between the applicant's claims and Price are simply "design choices". Applicant respectfully disagrees and requests that the USPTO allow all currently rejected claims for the following reasons.

I. The differences between the claimed invention and Price are more than "design choices"

A. Comparison of Price and the claimed invention

Before beginning the required claim-by-claim response, a comparison of Price versus the claimed invention will help to place Applicant's remarks into context.

Price is drawn to a *pedal* boat having two pontoons and a *paddle wheel*. A user sits on a legless chair between the tops of the pontoons and propels himself by pedaling the wheel in front of him with his extended legs.

Applicant's claimed invention is drawn to a paddled boat that is propelled by dipping and sweeping a hand held paddle in a manner similar to a kayak or canoe. Applicant's invention is particularly stable, and can be operated by a user in a number of positions. "The present invention provides a watercraft that can be used by a human in any of a sitting, ***standing***, ***riding***, kneeling or recumbent position.

The watercraft is particularly stable and highly adapted for use in a variety of ergonomic positions." See application paragraph 0014, emphasis added). Embodiments of the invention are also particularly fast, i.e., faster than a longer kayak at certain speeds. (See Rosen Affidavit ¶6 in Appendix A).

The following section discusses in detail differences between Applicant's claims and Price, and explains why these differences are more than design choices. Claims 1 and 20 are independent claims while all other claims are dependent claims. Though each claim is discussed separately below, Applicant respectfully submits that each dependent claim is further patentable for the same reasons as all other claims to which it refers.

In addition, none of the discussion in this response is intended to imply that any claims should have additional limitations read into it.

Claim 1

Claim 1 is drawn to a watercraft comprising:

"a first hull comprising a cavity extending from the top of the hull downwards substantially to the bottom of said hull...

'a second hull comprising a cavity extending from the top of the hull downwards substantially to the bottom of said hull..."

Applicant respectfully submits that the differences between claim 1 and Price are more than just design choices for the following reasons.

First, claim 1 requires a first and a second hull each comprising "a cavity extending from the top of the hull downwards substantially to the bottom of said hull". Price does not disclose the use of a hull, but rather of a pontoon. According to http://www.dictionary.com (page with definition appended hereto as Appendix B), a pontoon is a "low, flat vessel...", while a hull is a"[t]he frame or body of a ship..." In common usage, a pontoon boat comprises two or more sealed floats (viz., pontoons) *on top of which* the passengers ride, often on a bridging platform (see, e.g., http://www.southlandboat.com/00_AN/03_Catalogue/pontoon/catalogue_technical.php, attached hereto as Appendix C), as may be seen in Figure 1, below. Price's boat similarly comprises two sealed floats *on top of which* the passenger sits, although Price dispenses with the bridging deck.

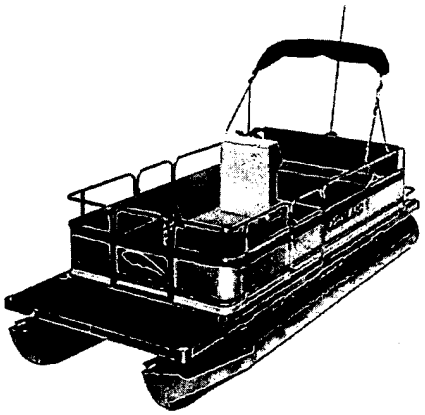

Figure 1

Second, Price does not disclose a cavity, but rather discloses several shallow recesses. In particular, Price discloses an upper recess 17 (col. 2 lines 40-45) and a foot pocket 28 (col. 2 lines 55-60). Part 31 (Fig. 1) appears to be equivalent to part 28. "Each

recess 17 is formed with a pocket 28 so dimensioned as to accommodate the pedal 27" (col. 2 lines 46-60). A "recess" is "[a]n indentation or small hollow" (see, e.g., http://www.yourdictionary.com/ahd/r/r0081900.html, Appendix D).

Applicant, on the other hand, claims a boat made up from two hulls, each of which have at least an open cavity extending substantially to the bottom, into which the passenger normally inserts his feet and at least the lower legs. These deep hulls allow a passenger to paddle while standing. See Figures 2a-c, below.

Figure 2a

Figure 2b

Figure 2c

Such deep hulls are necessary for having one or more user's feet below the centers of buoyancy of the hulls, which in turn provides the stability needed to permit a user to use the watercraft of claim 1 in any of a standing, sitting, kneeling, or riding positions. (Rosen Affidavit ¶4, 9, and 10).

Claim 2

Claim 2 requires a saddle attached to the connector of claim 1. Price does not disclose a saddle but rather has a seat. A saddle, according to Mirriam-Webster's on-line dictionary (Copyright 2004) at http://www.m-w.com/cgi-bin/dictionary (see Appendix E), is "a seat to be straddled by the rider of a vehicle (as a bicycle)" or, of course, a horse. Straddling implies sitting astride. In the watercraft of claim 2 , as on a horse, a straddle riding position allows the rider to rapidly communicate to the vehicle weight shifts needed for balance and steering by pressing against the saddle with the knees and thighs

(See paragraph 0027 of the application). The combination of a saddle and the cavities extending substantially to the bottom of the hulls allows an occupant to stand and paddle while straddling the saddle. Standing OR sitting paddling while straddling the saddle is enabled by the combination of a saddle and the cavities extending to the bottom of the hull, and these are thus not simply design choices.

A saddle-shaped seat in Price's invention would be counterproductive since a user must extend his legs forward to reach the pedals. However, a saddle is directly associated with the function of the watercraft of claim 2, since a saddle allows a user to move back and forth to reach a comfortable position, and is shaped to allow a user to choose any of a sitting, kneeling, recumbent, or riding positions allowable in the Applicant's watercraft of claim 2.

Claim 3

Claim 3 requires that "at least a portion of the bottom of the hull that is accessible through the cavity of each hull is substantially flat". Again, this is not a design choice, but is rather required for most applications in which the user is paddling using the watercraft of claim 3. If the portion of the surface on which the user supports his feet and legs is not substantially flat, the user will have difficulty supporting his body with his feet and legs, or, if kneeling, on his knees, at least not comfortably enough to paddle for significant distances.. Thus, this is again not a design choice.

Claim 4

Claim 4 requires a "saddle that is longer than wider in the fore-aft dimension than side to side". Again, this is not a design choice but is *required* for certain functionality.

A saddle that is longer than wider in the fore-aft dimension allows a user to shift his weight from the front of the watercraft of claim 4 to its back, thus raising the bow. This maneuver allows a user to launch and beach the watercraft on land or ice without stepping into water (see paragraph 0043 of the application). It also enables adding more than one passenger and distributing the passengers' weight according to various needs (see Figure 5 of the specification).

Thus, this limitation is directly related to function and is not a design choice.

Claims 5-8

Each of these claims requires a range for the specific wetted beam, length to beam ratio, or beam to draft ratio. The USPTO states that it would be obvious to make these design choices based on "required size of said hull, its intended operating height over the surface of a body of water, and its intended draft within said body of water." Applicant respectfully disagrees for the following reasons.

First, the claimed design parameters are not obvious for achieving the intended purpose – stability and comfort even when the watercraft is paddled in a standing position (as well as in other positions). Applicant's watercraft of these claims is hyperstable by having narrow and tall hulls (See Rosen Affidavit ¶ 11). Price achieves stability for sitting applications by having wide and flat

pontoons. Thus, Price would not suggest applicant's invention to the skilled artisan. Price does not disclose hulls with similar configurations.

The usual approach for increasing stability in similar watercraft is to make each hull wide and widely separated (at least making the outer edges wide apart. See, for example, Craig (U.S. Pat. No. 5,529,008 Col 2 lines 55 – 61), who teaches away from the watercraft of these claims by stating "The ratio of the overall length L of a float to its width W is between about 4.5/1 and 6/1" and the overall watercraft width to length ratio is "about 2/1, ***whereby a high degree of craft stability ... is assured***. The ratio of float ***width W to thickness T is about 4/1***." (Emphasis added). Compare this with currently pending claim 7 wherein the "float" length to width ratio is between 12/1 and 40/1 and paragraph 0021 of the application which states, "[p]referably, each of the hulls is taller than wide ...", that is, a "float" width to thickness ratio of less than 1.

Upchurch (U.S. Pat. No. 4,295,236) similarly teaches away from Applicant's invention of claims 5-8. Col 3 lines 21-24 states, "[h]ence, the preferred length-to-width ratio [of each pontoon] is about $4\ ^1/_2$".

Claims 9-11

Claims 9-11 each specify a distance between the two hulls of claim 1. These parameters are again not design choices but rather embodiments within these ranges provide superior hydrodynamic properties. See Rosen Affidavit ¶12.

Claim 15-16

Claim 15 requires that each of the hulls is "taller than wider", and claim 16 requires that "each hull is between 12 inches and 20 inches tall". This again is not a design choice but is a required for certain functions. In particular, narrow hulls are preferred by Applicant based on hydrodynamic principles and the relatively tall height is required to provide stability.

Price neither discloses nor suggests the use of narrow and tall hulls for stability.

Additionally, the tall hulls provide yet another functionality that is not possible with Price's invention. A user of the watercraft of claims 15-16 can get on / off ice and land without stepping into water. Similarly, a user can make a sharp turn by "leaning into the turn". The greater height of each hull makes both of these possible, and is thus not simply a design choice. (See Rosen Affidavit ¶ 13-14).

Claim 17

Claim 17 requires a beam to draft ratio between 1:1 to 2:1. Narrow, tall hulls act synergistically to provide faster and more stable hulls than seen in the prior art (see Rosen Affidavit ¶11-14). Again, the narrow hulls allow for greater speed, while the tall hulls allow greater stability. Applicant respectfully submits that these configurations are not simply design choices for the same reasons as claims 5-8 and 15-16.

Claim 18

Claim 18 requires that the connector of claim 1 "be approximately coincident with the center of buoyancy of said first and said second hull in said fore-aft dimension". Price's pontoons are connected by the paddlewheel structure in front of the center of buoyancy, and by the seat behind it.

Claim 19-22

Applicant respectfully submits that the novelty in claims 19-22 is more than just a "design choice" for the same reasons as claims 1-2.

II. The USPTO has not met the burden of the prima facie case of obviousness.

Claim 1-11 and 15-22 were rejected pursuant to 35. U.S.C. §103(a), which states in relevant part:

> "A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."

MPEP Section 2142 (May 2004 edition) discusses the prima facie case of obviousness that must be established by the USPTO to reject claims pursuant to 35. U.S.C. §103(a). In particular, three basic criteria must be met to establish a prima facie case of obviousness. MPEP Section 2142 states:

> "First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teachings or suggestions to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

The fact that a prior art device could be modified into the claimed invention does not make the claimed invention obvious. Rather, the prior art must suggest or motivate the desirability of making the modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984); *In re Laskowski*, 871 F.2d 115, 10 USPQ2d 1397 (Fed. Cir. 1989). It is not sufficient that one would have been able to produce the claimed invention, but instead the USPTO must

show that at the time, it would have been obvious to produce the claimed invention without the benefit of hindsight. *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1 USPQ2d 1081(Fed. Cir. 1986).

As discussed above, Applicant's invention is vastly different than Price's due to the different functionality of Applicant's invention. The USPTO has not provided sufficient evidence of motivation to make these changes to develop Applicant's invention since, in fact, the prior art teaches away from certain aspects of the applicant's invention. Additionally, the USPTO has not provided evidence that all limitations of Applicant's claims are in the prior art.

Based on the foregoing, Applicant respectfully requests that the USPTO allow all pending claims. Please contact the undersigned if any issues can be resolved by telephone.

Respectfully submitted,

Dated: 8/10/04

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